

TI Design of synthetic hexapeptide \*\*\*substrates\*\*\* for prostate-specific  
antigen using single-position minilibraries  
AU Yang, C. F.; Porter, E. S.; Boths, J.; Kanyi, D.; Hsieh, M.; Cooperman, B.  
S.  
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SO Journal of Peptide Research (1999), 54(5), 444-448  
CODEN: JPERFA; ISSN: 1397-002X  
PB Munksgaard International Publishers Ltd.  
DT Journal  
LA English  
AB Prostate-specific antigen (PSA), a serine endoprotease with  
chymotrypsin-like \*\*\*substrate\*\*\* specificity, is a marker used widely  
for detection of prostate cancer and other prostate diseases, catalyzing  
hydrolysis of the gel-forming proteins semenogelins I and II, which are  
synthesized and secreted by the seminal vesicle. In this study we report  
the use of two single-position minilibraries and RP-HPLC selection to  
optimize a hexapeptide \*\*\*substrate\*\*\* for PSA, spanning  
\*\*\*substrate\*\*\* positions P3 to P3'. PSA has been shown previously to  
prefer tyrosine in position \*\*\*P1\*\*\* (Denmeade, S.R., et al., 1997).  
Here we demonstrate preference for serine in position \*\*\*P1\*\*\* ' and  
strong preference for phenylalanine in position P2. Based on these  
results we have designed and demonstrated the utility of the optimized  
fluorogenic PSA \*\*\*substrate\*\*\* 7-methoxy-coumarin-4-  
acetylGlnPheTyrSerSerAsnLys(.epsilon.-2,4-dinitrophenyl)amide, which  
permits continuous monitoring of PSA endopeptidase activity at high  
sensitivity.

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L68 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1998:556406 CAPLUS

DN 129:312624

TI \*\*\*Substrate\*\*\* specificity of non-pepsin-type acid proteinase,  
Aspergillus niger proteinase A

AU Komatsu, Shinji; Nishii, Wataru; Sasaki, Hiroshi; Muramatsu, Tomonari;  
Tanokura, Masaru

CS Biotechnology Research Center, University of Tokyo, Tokyo, 113, Japan

SO Advances in Experimental Medicine and Biology (1998), 436(Aspartic  
Proteinases), 345-348

CODEN: AEMBAP; ISSN: 0065-2598

PB Plenum Publishing Corp.

DT Journal

LA English

AB The peptide \*\*\*library\*\*\* method was applied to investigate the  
\*\*\*P1\*\*\* and P2 site specificities of Aspergillus niger proteinase A.  
The resp. peptide \*\*\*substrates\*\*\* were RGFFXTpra and RGFXYTPRA. The  
specificity at the \*\*\*P1\*\*\* site is higher than that at P2 and is  
considerably complicated. Methionine, phenylalanine and histidine are the  
preferred \*\*\*P1\*\*\* site residues. The results on P2 site specificity  
showed that the \*\*\*enzyme\*\*\* tends to \*\*\*cleave\*\*\* only those  
peptides which contain large residue at P2; residue charge did not  
affect specificity.

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD  
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(FILE 'HOME' ENTERED AT 17:50:58 ON 10 AUG 2005)

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 17:51:13 ON 10 AUG 2005

L1 42 S HYDROPATHIC INDEX

L2 1 S L1 AND REVIEW  
 L3 0 S HYDROPATHIC INDEX/TI  
 L4 798 S HYDROPATHIC  
 L5 130 S HYDROPATHIC/TI  
 L6 3 S L5 AND REVIEW  
 L7 3 DUP REM L6 (0 DUPLICATES REMOVED)  
 L8 301 S L4 AND PREDICT?  
 L9 2 S L8 AND REVIEW  
 L10 304 S HYDROPATH?/TI  
 L11 174 S L10 NOT L5  
 L12 0 S L11 AND ENZYM? AND SUBSTRAT?  
 L13 7 S L11 AND ENZYM?

FILE 'STNGUIDE' ENTERED AT 17:59:06 ON 10 AUG 2005

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 18:00:23 ON 10 AUG 2005

L14 124 S HYDROPATH? AND ENZYM? AND SUBSTRAT?  
 L15 0 S L14 AND REVIEW  
 L16 42 S L14 AND (PREDICT? OR UNPREDICT?)  
 L17 0 S L14 AND UNPREDICT?  
 L18 1 S L16 AND CLEAV?  
 L19 16 S L14 AND LIBRARY  
 L20 8 DUP REM L19 (8 DUPLICATES REMOVED)  
 L21 5 S L14 AND SUBSTIT?  
 L22 3 DUP REM L21 (2 DUPLICATES REMOVED)  
 L23 55 S HYDROPATH? AND PEPTID? AND MIM?  
 L24 22 DUP REM L23 (33 DUPLICATES REMOVED)  
 L25 2 S L24 AND REVIEW  
 L26 2 S L24 AND ENZYM?  
 L27 4559 S HYDROPATH?  
 L28 45 S L27 AND OLIGOPEP?  
 L29 33 DUP REM L28 (12 DUPLICATES REMOVED)  
 L30 0 S L29 AND REVIEW  
 L31 5 S L29 AND ENZYM?  
 L32 11 S L10 AND REVIEW  
 L33 8 S L32 NOT L6  
 L34 6 DUP REM L33 (2 DUPLICATES REMOVED)

FILE 'STNGUIDE' ENTERED AT 18:22:44 ON 10 AUG 2005

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 18:24:17 ON 10 AUG 2005

L35 103 S L27 AND REVIEW  
 L36 5 S L35 AND SUBSTRAT?  
 L37 5 DUP REM L36 (0 DUPLICATES REMOVED)  
 L38 62 S L27 AND ((OLIGOPEP?) OR (PEP? MIM?) OR PEPTO?)  
 L39 39 DUP REM L38 (23 DUPLICATES REMOVED)  
 L40 9 S L39 AND (ENZYM? OR SUBSTRAT?)  
 L41 9 DUP REM L40 (0 DUPLICATES REMOVED)  
 L42 1095 S L27 AND ENZYM?  
 L43 13 S L27 AND CONSERV? SUB?  
 L44 5 DUP REM L43 (8 DUPLICATES REMOVED)  
 L45 24 S L27 AND SUBSTRAT?/TI  
 L46 8 DUP REM L45 (16 DUPLICATES REMOVED)  
 L47 15695 S SITE DIRECT? AND MUTAGEN? AND SUBSTRAT?  
 L48 2511 S L47 AND SUBSTRAT?/TI  
 L49 97 S L48 AND CONSERVATI?  
 L50 0 S L49 AND REVIEW  
 L51 53 DUP REM L49 (44 DUPLICATES REMOVED)  
 L52 862 S SUBSTRAT?/TI AND ENZYM? AND LIBRAR?  
 L53 233 S L52 AND (CLEAV? OR SISS?)  
 L54 0 S L53 AND SISS?  
 L55 0 S L53 AND SISC?

L56 241 S L52 AND (CLEAV? OR SCIS?)  
 L57 2 S L56 AND REVIEW  
 L58 2 DUP REM L57 (0 DUPLICATES REMOVED)  
 L59 3 S L56 AND HYDROPATH?  
 L60 981 S SUBSTRAT? AND ENZYM? AND LIBRAR? AND (CLEAV? OR SCIS?)  
 L61 976 S L60 NOT (L57 OR L58 OR L59)  
 L62 15 S L61 AND REVIEW  
 L63 11 DUP REM L62 (4 DUPLICATES REMOVED)  
 L64 130 S L61 AND P1  
 L65 70 DUP REM L64 (60 DUPLICATES REMOVED)  
 L66 28 S L65 AND (ALZH? OR APP? OR AMYLOID?)  
 L67 1 S L65 AND (ALZH? OR APP OR AMYLOID?)  
 L68 8 S L65 AND STRUCTURE ACTIVITY  
 L69 0 S L65 AND REVIEW

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